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ABSTRACT

This study sought to determine the convergent and discriminant validity of the PIAT when administered to separate samples of Anglo and Mexican-American children. Thirty-one Mexican-American and 31 Anglo-American children were matched on the basis of sex, age, SES, educational placement, and reason referred for psychological assessment. All children were administered the PIAT, Wide Range Achievement Test (WRAT), and Wechsler Intelliegnce Scale for Children-Revised (WISC-R). Partial intercorrelations (CA held constant) among the PIAT subtest raw scores and subtests of the WRAT and WISC-R purporting to measure the same construct were performed. Adequate convergent validity was found for the PIAT Mathematics, General Information, Spelling, and Reading Recognition subtests for both Anglo and Mexican-American children. Poor discriminant validity was obtained for all PIAT subtests evaluated. It was concluded that the PIAT may be of value when used in conjunction with the WISC-R to differentiate between specific learning difficulties and an English language deficiency with Mexican-American populations. (Author)

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# Comparison of PIAT Validity With Anglo and Mexican-American Children

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The interpretations of tests administered to members of minority populations pose a special problem for the clinical diagnostician. When a test is standardized on children in the educational mainstream, its usefulness is debatable with children who are culturally different (Deutsch, Fishman, Kogan, North, & Whiteman, 1964). For example, the Peabody Individual Achievement Test (PIAT) (Dunn & Markwardt, 1970) is an achievement screening instrument which includes only 4.3 percent minority children in its standardization sample. Obviously, interpretation of Mexican-American children's performance on the PIAT requires knowledge of the instrument's validity with this culturally different population. Unfortunately, due to the recent publication of the PIAT, little evidence is available regarding this issue. The present study sought to determine the convergent and discriminate validity of the PIAT when administered to separate samples of Anglo and Mexican-American children. The Campbell & Fiske (1959) model was used to compare the PIAT subtests with corresponding subtests of the Wide Range Achievement Test (WRAT) (Jastak, Bijou, & Jastak, 1965) and the Wechsler Intelligence Scale for Children-Revised (WISC-R).

In the present study, 31 Mexican-American and 31 Anglo-American children were matched on the basis of sex, age, SES, educational placement, and reason referred for psychological assessment. All children were administered the PIAT, WRAT, and WISC-R. Partial intercorrelations among the PIAT subtest raw scores and subtests of the WRAT and WISC-R purporting to measure the same construct were performed.

Adequate convergent validity of the PIAT Mathematics, General Information, Spelling, and Reading Recognition subtests was found for both Anglo and Mexican-American children. The differences between the two groups' validity coefficients were not found to be significant ($\alpha = .05$). Poor discriminate validity was found for all the PIAT subtests evaluated. The Anglo-American group scored significantly better on the mathematics subtest of both the PIAT and WRAT. The mean verbal scale IQ score (WISC-R) for the Anglo children was significantly ($p < .05$) above that found for Mexican-American children.

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The implications of these data are: (A) the ability of the PIAT to differentiate constructs that individual subtests purport to measure over the method in which they were measured was inadequate for both Mexican and Anglo-American groups; (B) the PIAT taken in its entirety may be of value to the clinical diagnostician in ascertaining gross discrepancies between intelligence and achievement; (C) although the reason for psychological assessment was the same for both groups, the data suggests more of an English language deficiency than a specific learning difficulty for the Mexican-American children.

Table 1

Partial Intercorrelations Among the Various Subtests

| Subtest | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Subtest |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. PIAT MA | | | .40 | -.13 | .17 | .66 | .24 | .41 | .19 | -.06 | (.69) | 1. WISC-R AR |
| 2. PIAT RR | .58 | | | -.06 | -.28 | .11 | (.76) | .25 | .18 | -.14 | .45 | 2. WISC-R I |
| 3. PIAT RC | .60 | .88 | | | .51 | .35 | -.06 | (.77) | .58 | .39 | .31 | 3. WRAT SP |
| 4. PIAT SP | .62 | .72 | .74 | | | .42 | .31 | .70 | .73 | (.84) | .39 | 4. WRAT RE |
| 5. PIAT GI | .61 | .62 | .75 | .60 | | | -.28 | .40 | -.07 | .15 | (.64) | 5. WRAT AR |
| 6. WRAT AR | (.71) | .50 | -.10 | -.25 | .08 | | | .38 | .26 | .19 | .56 | 6. PIAT GI |
| 7. WRAT RE | .50 | (.88) | .72 | .72 | .32 | .64 | | | .59 | .75 | .72 | 7. PIAT SP |
| 8. WRAT SP | .21 | .69 | .50 | (.78) | .18 | .55 | .72 | | | .69 | .62 | 8. PIAT RD |
| 9. WISC-R I | .68 | .48 | .63 | .61 | (.89) | .07 | -.32 | -.15 | | | .46 | 9. PIAT RR |
| 10. WISC-R AR | (.89) | .59 | .60 | .68 | .58 | .73 | -.03 | -.24 | .73 | | | 10. PIAT MA |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |

Anglo-American

Mexican-American